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L1: Entry 1 of 2

File: JPAB

Oct 14, 1997

PUB-NO: JP409269719A

DOCUMENT-IDENTIFIER: JP 09269719 A

TITLE: MANUFACTURE OF HOLOGRAM

PUBN-DATE: October 14, 1997

## INVENTOR-INFORMATION:

NAME

COUNTRY

ONO, MOTOJI

## ASSIGNEE-INFORMATION:

NAME

COUNTRY

ASAHI GLASS CO LTD

APPL-NO: JP08104251

APPL-DATE: March 29, 1996

INT-CL (IPC): G03 H 1/26; G03 H 1/04

## ABSTRACT:

PROBLEM TO BE SOLVED: To manufacture a multiple exposure hologram which has less noise and has high hologram diffraction efficiency by one time of exposure by forming a first luminous flux as randomly polarized light, circularly polarized light or 45° polarized light, a second luminous flux as light of P polarized light, and a third luminous flux as light of S polarized light, and irradiating a hologram photosensitive material with these luminous fluxes.

SOLUTION: The hologram photosensitive material 2 laminated on a glass substrate 1 is simultaneously irradiated the reference light 8 of the randomly polarized light, the object light 9 of the S polarized light and the object light 10 of the P polarized light. Interference occurs between the reference light 8 and the object light 9 and between the reference light 8 and the object light 10, respectively. Two sets of the holograms respectively corresponding to the combination of the reference light 8 and the object light 9 and the combination of the reference light 8 and the object light 10 are simultaneously recorded. The light of the S polarized light and the light of the P polarized light having the polarization direction intersecting orthogonally with each other do not interfere and, therefore, the object light 9 and the object light 10 do not interfere and the undesired hologram interference fringes by the interference of the object light 9 and the object light 10 are not recorded.

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L18: Entry 21 of 22

File: DWPI

Oct 14, 1997

DERWENT-ACC-NO: 1997-556124

DERWENT-WEEK: 199751

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TITLE: Hologram production method for multiplex filter of optical computer - involves irradiating S polarized light beam, P polarized light beam and random polarized light beam, simultaneously on hologram light sensitive material supported on glass substrate

## PATENT-ASSIGNEE:

ASSIGNEE

CODE

ASAHI GLASS CO LTD

ASAG

PRIORITY-DATA: 1996JP-0104251 (March 29, 1996)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 09269719 A	October 14, 1997		005	G03H001/26

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP09269719A	March 29, 1996	1996JP-0104251	

INT-CL (IPC): G03 H 1/04; G03 H 1/26

ABSTRACTED-PUB-NO: JP09269719A

## BASIC-ABSTRACT:

The method involves irradiating an object light (9) of a S polarized light beam, an object light (10) of a P polarized light beam and a reference beam (8) of a random polarized light, simultaneously on a hologram light sensitive material (2) formed on a glass substrate (1).

A pair of interference pattern is formed in between the S polarized light beam and the random polarized reference beam, and in between the P polarized light beam and the random polarized reference beam, respectively. Two sets of desired holograms are recorded simultaneously on the hologram light sensitive material.

ADVANTAGE - Has high hologram diffraction efficiency. Enables to record two sets of desired holograms simultaneously. Reduces noise, remarkably.

CHOSEN-DRAWING: Dwg.1/5

TITLE-TERMS: HOLOGRAM PRODUCE METHOD MULTIPLEX FILTER OPTICAL COMPUTER IRRADIATE LIGHT BEAM P LIGHT BEAM RANDOM LIGHT BEAM SIMULTANEOUS HOLOGRAM LIGHT SENSITIVE MATERIAL SUPPORT GLASS SUBSTRATE

DERWENT-CLASS: P84 T01 V07

EPI-CODES: T01-E05A; V07-F02C; V07-K06;